"avoid interobserver variability" by reviewing all of his own charts himself. As he has stated, this will certainly decrease such variability, but I am concerned that other unconscious biases may be introduced any time an investigator assesses the value of his own work by reviewing that work himself.

A second possible problem may occur in that one patient may have several diagnoses. Thus, when Dr. Babb states that 8 percent of the patients seen were obese and 6 percent had hypertension, if a patient had both obesity and hypertension (potentially a common occurrence) the numerator of the statistic "percent of patients" (which really seems to be the number of diagnoses made) would be spuriously elevated faster than the denominator of that same fraction (which is the total number of patients).

Third, in examining the diagnoses made in the 420 executives, one might observe that (as the author does state) many of the diagnoses were already known to the patients or to their physicians. Thus, a statement that 30 percent of the executives were found to have at least one disease does not necessarily support the conclusion that executive health examinations are worthwhile, since a much smaller percent (see below) of these diagnoses were new and actually discovered by means of the executive examination.

One could also observe that many of the diagnoses that were new could have been made without the extensive and expensive executive health program. The 5 new obese, 20 new hypertensive and 6 new glaucoma patients, for example, could easily have been detected without such a costly program by a good nurse. To state prevalence rates of such diseases as justification for executive examinations ignores the fact that these diseases could be detected in much more cost-efficient ways.

In reexamining Dr. Babb's data, it may be seen that there were indeed 46 new diagnoses made which could conceivably have been made best by a physician doing a good examination, and could thus potentially help validate the executive health examination. (These new diagnoses were 3 new cases of depression, 6 of alcoholism, 4 of anxiety, 8 of arthridities, 8 of hernia and 17 of miscellaneous disorders.) If one assumes the worst, that there were 46 different people who had these 46 diagnoses, then approximately 10 percent of the population screened would have been found to have a new diagnosis. One might argue that a 10 percent rate of new diagnoses indeed justifies the costly program, but it does seem less impressive than the 30 percent that Dr. Babb had quoted.

If the corporations and executives involved were accurately informed that (1) (as Dr. Babb admits) the pulmonary function studies, x-ray films and electrocardiograms were "of little benefit," that (2) the connection between any laboratory abnormalities and improvement of health is unclear and that (3) many of the diagnoses could be made by much simpler and less expensive screening tests, perhaps the corporations and executives would request such programs less often.

Possibly part of the large sum of money spent (400 times $300 equals $120,000 a year) could better be targeted on specific, much simpler health screening procedures, and the remainder on health educational programs which might be of more benefit to patients.

LEE C. SCHUSSMAN, MD
Robert Wood Johnson Fellow
University of Utah College of Medicine
McKay-Dee Family Practice Center
Ogden, Utah

* * *

TO THE EDITOR: I take issue with Dr. Richard R. Babb's article "An Evaluation of the Executive Health Examination," because it ignores cost-effectiveness.

It should be emphasized that the costs of the program were $250 to $350 per examination. The major findings were obesity, hypertension, depression, alcoholism and anxiety, as well as such poor health habits as sedentary life-style and smoking. The most poignant remark in the article, in my opinion, was "When an attempt was made by me to decrease the number of screening tests, executives were often upset, and their companies asked that the program not be changed."

There is a major effort on the part of medicine to clean its house. In the context of a society applying increased pressure on the "health care delivery" system to contain costs, this article is not helpful. It is redeeming, however, if we realize that the pressure in this unique situation was to spend as much money and time as possible. By so doing the major findings, as I have interpreted them, are remarkable indeed. They are the ones that would take a paramedic with some background in psychology about 30 minutes to make at a cost of perhaps $20.

The concept of an executive health examination in this day and age is archaic and carries the

stigma of elitism. The average health consumer must find this offensive. We need all the allies we can get—especially the average man.

BARRY D. ORVELL, MD
Oakland, California

* * *

TO THE EDITOR: In regard to Dr. Richard Babb's article, "An Evaluation of the Executive Health Examination," I have the following comments:

Surely any competent physician does not need to spend $250 to $350 in order to diagnose obesity, emotional illness and drug dependence. On reviewing Dr. Babb's data, I see virtually no *significant* illness that could not have been discovered by a simple history and physical examination with perhaps the addition of tonometry.

I am sure, as Dr. Babb states, that corporations are satisfied with this program. It is relatively easy to spend money for high-technology screening tests in the mistaken belief that testing is equated with health.

Executives, like any other workers, are subject to occupational hazards. Certainly, if a worker is being exposed to lead, for example, some attempt would be made to reduce exposure. In the same way, why not take the money saved by streamlining these costly executive health examinations and attempt environmental modification to reduce exposure to executive occupational hazards: two-martini lunches, smoking, emotional stress and lack of exercise.

BENJAMIN GRAHAM, MD
Student Health Service
San Francisco State University
San Francisco

* * *

TO THE EDITOR: After analysis of his data, Dr. Richard R. Babb concludes that the executive health examinations discussed in his article are indeed worthwhile. In this era of cost-effective medicine and appropriate utilization of medical resources, I am in absolute disagreement with this conclusion.

One must first understand that the patient population concerned has excellent access to the health care system if and when significant symptoms arise. A diagnosis such as arthritis in 3 percent of patients, found by "physical findings [in the hands] and x-ray studies of the spine, hip, and knees" is not a very good *pickup* by a screening study because the treatment is essentially symptomatic (one cannot change the course of degenerative joint disease) and, in this patient population, those patients who are symptomatic will go see their doctors.

Similarly, if one looks at the combination of obesity, depression, alcoholism and anxiety (should one include smoking?), are these really new findings in a health screening examination? Dr. Babb himself had seen 218 of the 420 patients in previous years. One would think that these problems could have been picked up earlier by himself or his colleagues who saw the other 202 patients. Do these findings really belong in his statistics of diseases detected by the particular health examination he is studying? Yet, they account for 18 percent of his calculated 30 percent. Indeed, for these illnesses, the treatment is (frustratingly) so poor that the value of finding them is, in itself, somewhat questionable. Significant findings (a term which I will define as those that can be used in some way that will have a likelihood of benefitting a patient's health), including hypertension, glaucoma and inguinal hernia, occurred in only 9.5 percent of patients.

The cost of these 420 examinations was $126,000. For $126,000, one could have a technician march through every corporate office in Palo Alto measuring the blood pressure and intraocular pressure of every executive, secretary, elevator operator and cleaning person (possibly even commenting along the way "You're too fat—lose weight" or "Stop smoking") and pick up almost all of the significant findings of Dr. Babb's group, as well as serving a larger group of people who generally have less access to our health care system (and more need for free examinations) than do a group of corporate executives.

LONNY SHAVELSON, MD
Berkeley Free Clinic
Berkeley, California

* * *

Dr. Babb Replies

TO THE EDITOR: As mentioned in the opening remarks of my paper, there is considerable debate revolving around the concept of annual, or even periodic, health examinations. Critics, however, often equate an executive health examination with the checkup of a private patient, and this is not appropriate.

Corporate leaders understand "cost-effectiveness" far better than most doctors and, thus far, have felt their money well spent promoting the health of employees. Considerable time and money is spent on executive training and future management strategy. Considerations of executives' emotional and physical health are important in